

Mortality

An Overview: 2005

Total South Dakota Resident Deaths	7,074
Crude Death Rates per 100,000 population	
South Dakota	937.1
United States (Provisional)	820.0
Age-Adjusted Death Rates per 100,000 population	
South Dakota	816.2
United States	**N/A
Age-Adjusted YPLL Before Age 75 per 100,000 population	
Whites	6,332
American Indians	21,695

In 2004, the South Dakota Department of Health implemented the new standard death certificate. Multiple races could be indicated on the certificate for the first time. Please see page 219 in the Technical Notes for a more in depth explanation.

In 1999, South Dakota along with the rest of the nation made two significant changes to the way mortality data were analyzed. These changes were the switch to using the 2000 U.S. Standard for age adjusting and using ICD-10 for disease classifications. As a result, comparison to reports prior to 1999 is not possible.

Table 46 displays the deaths, crude death rates, and age-adjusted death rates for the United States and South Dakota for the past 20 years.

Table 46
Resident Deaths, Crude Death Rates, and Age-Adjusted Death Rates,
South Dakota and United States, 1986-2005

Year	United States			South Dakota		
	Number	Crude Rate	Age-Adjusted Rate	Number	Crude Rate	Age-Adjusted Rate
2005	*2,432,000	*820.0	**N/A	7,074	937.1	816.2
2004	*2,398,365	*816.7	*801.1	6,811	902.3	783.6
2003	2,448,288	841.9	832.7	7,109	941.8	819.2
2002	2,443,387	847.3	845.3	6,886	912.2	791.0
2001	2,416,425	848.5	854.5	6,915	916.1	796.3
2000	2,403,351	854.0	869.0	7,014	929.2	804.8
1999	2,391,399	857.0	875.6	6,941	997.3	799.1
1998	2,337,256	847.3	870.6	6,850	984.2	791.1
1997	2,314,245	848.8	878.1	6,855	984.9	790.2
1996	2,314,690	859.2	894.1	6,793	976.0	788.1
1995	2,312,132	868.3	909.8	6,901	991.5	798.0
1994	2,278,994	866.1	913.5	6,724	966.1	778.5
1993	2,268,000	872.8	926.1	6,774	973.3	787.1
1992	2,175,613	848.1	905.6	6,680	959.8	777.6
1991	2,169,518	857.6	922.3	6,636	953.4	768.9
1990	2,148,463	863.8	938.7	6,320	908.0	735.1
1989	2,150,466	871.3	950.5	6,534	916.3	760.5
1988	2,167,999	886.7	975.7	6,567	926.1	764.6
1987	2,123,323	876.4	970.0	6,658	940.4	778.2
1986	2,105,361	876.7	978.6	6,583	929.6	775.1

Note: *U.S. 2005 and 2004 data are provisional.

**U.S. data not available.

Crude death rates are per 100,000 population.

Age-adjusted rates are computed with the 2000 standard.

Source: National Center of Health Statistics

South Dakota Department of Health, Office of Data, Statistics, and Vital Records

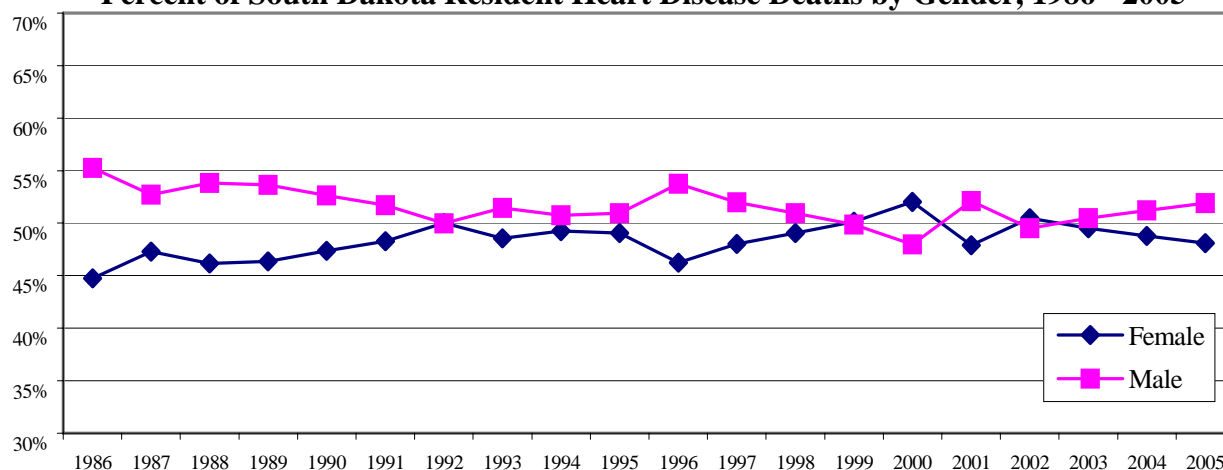
Leading Causes of Death

The five leading causes of death in 2005 for South Dakota residents were heart disease, cancer, cerebrovascular diseases, chronic lower respiratory diseases, and accidents.

Heart disease accounted for 24.9 percent of South Dakota's 2005 resident deaths a decrease of 4.6 percent from 2004. Heart disease was the leading cause of death for South Dakota residents for men and women alike as well as whites and American Indians. Figure 8, below, illustrates by gender the percent of South Dakota resident heart disease deaths for the last 20 years. Over the past 20 years,

the percent of deaths due to heart disease for males usually fell between 50 to 55 percent while for the females the percent of deaths due to heart disease usually fell between 45 to 50 percent. The majority of years showed males having a higher percent of deaths due to heart disease than females. However, this was not the case in 1999, 2000, and 2002 when females had a higher percent of death due to heart disease than males. In 2005, males showed a slight increase from 2004 in the percent of deaths due to heart disease while females showed a slight decrease from 2004 in the percent of deaths due to heart disease.

Figure 8
Percent of South Dakota Resident Heart Disease Deaths by Gender, 1986 - 2005



Source: South Dakota Department of Health, Office of Data, Statistics, and Vital Records

Cancer was the second leading cause of death and accounted for 22.8 percent of 2005 South Dakota resident deaths, a decrease of 0.4 percent from 2004. Trachea, bronchus, and lung cancer were the leading cause of cancer deaths during the year, accounting for 29.0 percent of cancer deaths.

Cerebrovascular diseases accounted for 7.2 percent of 2005 South Dakota resident deaths, an increase of 5.9 percent from 2004. Stroke, not specified as hemorrhage or infarction, caused the majority of the deaths for this type of disease.

Chronic lower respiratory disease accounted for 6.2 percent of 2005 South Dakota resident deaths, an increase of 6.9 percent from 2004. Chronic lower respiratory diseases include emphysema, asthma, and bronchitis.

Accidents caused 5.6 percent of all South Dakota resident deaths in 2005, a decrease of 6.7 percent from 2004. The two most common types of accidental deaths during the year were motor vehicle accidents, causing 45.7 percent, and falls, accounting for 29.3 percent of accidents.

Table 47, below, displays the breakdown of accidental deaths for the last five years. In 2005, there were 396 accidental deaths. There are two main types of accidental death, motor vehicle or other causes of accidental death.

The highest motor vehicle death in 2005 was car occupant with 93 deaths. The highest death in the other causes of accidental death in 2005 was falls with 116 deaths.

Table 47
South Dakota Resident Leading Causes of Death Due to Accidents, 2001-2005

	Total	Year of Death				
		2005	2004	2003	2002	2001
Total Deaths	1,919	396	407	390	344	382
Motor Vehicle Accidents	953	181	185	215	185	187
Car Occupant.....(V40-V49)	517	93	111	112	106	95
Occupant of Pick-Up Truck or Van.....(V50-V59)	183	33	33	44	37	36
Pedestrian.....(V01-V09)	75	20	13	14	11	17
Motorcycle Rider.....(V20-V29)	62	11	12	14	12	13
Occupant of Special All-Terrain Vehicle.....(V86)	42	5	6	11	9	11
Occupant of Heavy Transport Vehicle.....(V60-V69)	16	3	2	6	2	3
All Other Motor Vehicle Accidents	58	16	8	14	8	12
Other Causes of Accidental Death	966	215	222	175	159	195
Falls.....(W00-W19)	487	116	114	84	74	99
Accidental Poisoning(X40-X49)	91	21	31	13	17	9
Accidental Threats to Breathing (excl. drowning).....(W75-W84)	68	13	13	14	10	18
Exposure to Smoke, Fire, and Flames.....(X00-X09)	62	16	14	10	11	11
Accidental Drowning and Submersion.....(W65-W74, V90, V92)	45	10	8	11	7	9
Exposure to Excessive Natural Cold.....(X31)	24	9	5	4	4	2
Air Transport Accidents...(V95.0-V95.3, V95.8-V95.9, & V96-V97)	21	2	3	2	10	4
Accidental Discharge of Firearms.....(W32-W34)	21	3	4	7	5	2
Contact with Agricultural Machinery.....(W30)	11	1	1	3	4	2
All Other Causes of Accidents	136	24	29	27	17	39

Source: South Dakota Department of Health, Office of Data, Statistics, and Vital Records

Table 48, on the next page, lists South Dakota resident leading causes of death for the last five years. Heart disease, cancer, and cerebrovascular diseases have been the first, second, and third cause of death for the past five years. Chronic lower respiratory diseases and accidents have been fourth or fifth for the past five years. Influenza and pneumonia, diabetes mellitus, and Alzheimer's disease have been sixth, seventh, or eighth for the past five years. For the past two years, organic including symptomatic, mental disorders was not included in the leading causes of death. In the past it had ranked ninth. Likewise, nephritis, nephrotic syndrome, and nephrosis was not in the leading causes of death in 2005, 2004, or

2001. However, in the past, nephritis, nephrotic syndrome, and nephrosis had ranked tenth in 2003 and 2002. The ninth leading cause of death in 2005 and 2004 was intentional self-harm (suicide). Intentional self-harm (suicide) also made the leading causes of death in 2001 as the tenth cause. The tenth leading cause of death in 2005 was chronic liver disease and cirrhosis and essential (primary) hypertension and hypertensive renal disease. This was the second time in the last five years that chronic liver disease and cirrhosis was included in the leading causes of death for South Dakota residents and the first time that essential (primary) hypertension and hypertensive renal disease was included.

Table 48
South Dakota Resident Leading Causes of
Death, 2001-2005

Cause of Death	Total			2005			2004			2003			2002			2001		
	Rank	Deaths	Percent	Rank	Deaths	Percent	Rank	Deaths	Percent	Rank	Deaths	Percent	Rank	Deaths	Percent	Rank	Deaths	Percent
South Dakota (All Deaths)		34,795	100.0		7,074	100.0		6,811	100.0		7,109	100.0		6,886	100.0		6,915	100.0
Heart Disease(I00-I09, I11, I13, I20-I51)	1	9,398	27.0	1	1,764	24.9	1	1,775	26.1	1	1,942	27.3	1	1,933	28.1	1	1,984	28.7
Malignant Neoplasms (cancer).....(C00-C97)	2	7,973	22.9	2	1,610	22.8	2	1,559	22.9	2	1,645	23.1	2	1,561	22.7	2	1,598	23.1
Cerebrovascular Diseases(I60-I69)	3	2,458	7.1	3	511	7.2	3	463	6.8	3	475	6.7	3	518	7.5	3	491	7.1
Chronic Lower Respiratory Diseases.....(J40-J47)	4	1,954	5.6	4	440	6.2	5	393	5.8	5	379	5.3	4	382	5.5	5	360	5.2
Accidents(V01-X59, Y85-Y86)	5	1,919	5.5	5	396	5.6	4	407	6.0	4	390	5.9	5	344	5.0	4	382	5.5
Diabetes Mellitus(E10-E14)	6	1,070	3.1	8	239	3.4	7	227	3.3	7	201	2.8	7	193	2.8	6	210	3.0
Influenza and Pneumonia(J10-J18)	6	1,070	3.1	7	242	3.4	8	180	2.6	6	223	3.1	6	239	3.5	7	186	2.7
Alzheimer's Disease(G30)	8	1,047	3.0	6	289	4.1	6	255	3.7	8	175	2.5	8	169	2.5	8	159	2.3
Organic, Including Symptomatic, Mental Disorders.....(F00-F09)	9	563	1.6	*	*	*	*	*	*	9	159	2.2	9	144	2.1	9	135	2.0
Intentional Self-Harm (suicide)(X60-X84, Y87.0)	10	542	1.6	9	123	1.7	9	114	1.7	*	*	*	*	*	*	10	108	1.6
Nephritis, Nephrotic Syndrome, and Nephrosis(N00-N07, N17-N19, N25-N27)	*	*	*	*	*	*	*	*	*	10	131	1.8	10	128	1.9	*	*	*
Chronic Liver Disease and Cirrhosis.....(K70 & K73-K74)	*	*	*	10	83	1.2	10	97	1.4	*	*	*	*	*	*	*	*	*
Essential (primary) Hypertension and Hypertensive Renal Disease(I10 & I12)	*	*	*	10	83	1.2	*	*	*	*	*	*	*	*	*	*	*	*
All Other Causes		6,801	19.5		1,294	18.3		1,341	19.7		1,389	19.5		1,275	18.5		1,302	18.8

Note: Letter/number combinations following cause of death are ICD-10 codes.

Due to rounding disease-specific death rates may not sum to state death rate.

*This cause was not one of the ten leading causes of death for that year.

Source: South Dakota Department of Health, Office of Data, Statistics, and Vital Records

Race

Table 49, below, presents South Dakota resident leading causes of death by race. In 2005, patterns for the 10 leading causes of death varied by race. Eight of the 10 leading causes were the same for whites and American Indians, but they differed by rank. For example, chronic lower respiratory diseases was the fourth leading cause of death at 6.4 percent for the white population, but the sixth leading cause of death for the American Indian population at 4.2 percent.

Alzheimer's disease and essential (primary) hypertension and hypertensive renal disease are in the 10 leading causes of death for the white population, but not the American Indian population. Among the 10 leading causes of death for the American Indian population, but not for the white population were chronic liver disease and cirrhosis, mental and behavioral disorders due to psychoactive substance use, and assault (homicide).

Table 49
South Dakota Resident Leading Causes of Death
by Race, 2005

Cause of Death	All Races			White			American Indian		
	Rank	Deaths	Percent	Rank	Deaths	Percent	Rank	Deaths	Percent
South Dakota (All Deaths)		7,074	100.0		6,512	100.0		529	100.0
Heart Disease.....(I00-I09, I11, I13, I20-I51)	1	1,764	24.9	1	1,667	25.6	1	91	17.2
Malignant Neoplasms (cancer)....(C00-C97)	2	1,610	22.8	2	1,522	23.4	2	82	15.5
Cerebrovascular Diseases.....(I60-I69)	3	511	7.2	3	495	7.6	8	13	2.5
Chronic Lower Respiratory Diseases(J40-J47)	4	440	6.2	4	418	6.4	6	22	4.2
Accidents..... (V01-X59, Y85-Y86)	5	396	5.6	5	312	4.8	3	80	15.1
Alzheimer's Disease.....(G30)	6	289	4.1	6	286	4.4	*	*	*
Influenza and Pneumonia.....(J10-J18)	7	242	3.4	7	232	3.6	10	10	1.9
Diabetes Mellitus.....(E10-E14)	8	239	3.4	8	189	2.9	4	48	9.1
Intentional Self-Harm (suicide)(X60-X84, Y87.0)	9	123	1.7	9	105	1.6	7	18	3.4
Essential (primary) Hypertension and Hypertensive Renal Disease.....(I10 & I12)	10	83	1.2	10	76	1.2	*	*	*
Chronic Liver Disease and Cirrhosis(K70 & K73-K74)	10	83	1.2	*	*	*	5	32	6.0
Assault (homicide).....(X85-Y09, Y87.1)	*	*	*	*	*	*	9	13	2.5
Mental and Behavioral Disorders due to Psychoactive Substance Use.....(F10-F19)	*	*	*	*	*	*	10	10	1.9
All Other Causes	-	1,294	18.3	-	1,210	18.6	-	110	20.8

Note: Letter / number combinations following cause of death are ICD-10 codes.

Due to rounding, disease-specific death rates may not sum to state death rate.

* This cause was not one of the ten leading causes of death for this race group.

Source: South Dakota Department of Health, Office of Data, Statistics, and Vital Records

Gender

In 2005, patterns for the 10 leading causes of death also varied by gender in South Dakota (Table 50, on the next page). Eight of the 10 leading causes were the same for South Dakota's men

and women, but they differed in rank. Intentional self-harm (suicide) and chronic liver disease and cirrhosis were among the 10 leading causes of death for South Dakota's men, but not for women.

Likewise, essential (primary) hypertension and hypertensive renal disease and metabolic disorders were among the 10 leading causes of death for South Dakota's women, but not for South Dakota's men. Men were also more likely to die in accidents than women were, while women were more likely to die from Alzheimer's disease than men.

When ranked together, intentional self-harm (suicide) and essential (primary) hypertension and hypertensive renal disease were in the top 10 but when broken out by gender intentional self-harm (suicide) was ranked seventh for men and essential (primary) hypertension and hypertensive renal disease ranked ninth for women.

Table 50
South Dakota Resident Leading Causes of Death
by Gender, 2005

Cause of Death	Total			Male			Female		
	Rank	Deaths	Percent	Rank	Deaths	Percent	Rank	Deaths	Percent
South Dakota (All Deaths)		7,074	100.0		3,563	100.0		3,510	100.0
Heart Disease.....(I00-I09, I11, I13, I20-I51)	1	1,764	24.9	1	915	25.7	1	849	24.2
Malignant Neoplasms (cancer)....(C00-C97)	2	1,610	22.8	2	863	24.2	2	747	21.3
Cerebrovascular Diseases.....(I60-I69)	3	511	7.2	5	203	5.7	3	308	8.8
Chronic Lower Respiratory Diseases(J40-J47)	4	440	6.2	4	247	6.9	5	193	5.5
Accidents.....(V01-X59, Y85-Y86)	5	396	5.6	3	250	7.0	7	146	4.2
Alzheimer's Disease.....(G30)	6	289	4.1	9	85	2.4	4	204	5.8
Influenza and Pneumonia.....(J10-J18)	7	242	3.4	8	88	2.5	6	154	4.4
Diabetes Mellitus.....(E10-E14)	8	239	3.4	6	119	3.3	8	120	3.4
Intentional Self-Harm (suicide)(X60-X84, Y87.0)	9	123	1.7	7	104	2.9	*	*	*
Essential (primary) Hypertension and Hypertensive Renal Disease.....(I10 & I12)	10	83	1.2	*	*	*	9	43	1.2
Chronic Liver Disease and Cirrhosis(K70 & K73-K74)	10	83	1.2	10	51	1.4	*	*	*
Metabolic Disorders.....(E70-E90)	*	*	*	*	*	*	10	37	1.1
All Other Causes	-	1,294	18.3	-	638	17.9	-	709	20.2

Note: Letter / number combinations following cause of death are ICD-10 codes.

Due to rounding, disease-specific death rates may not sum to state death rate.

Failure to add up to total births because of 1 unknown gender.

* This cause was not one of the ten leading causes of death for this gender.

Source: South Dakota Department of Health, Office of Data, Statistics, and Vital Records

Age

Table 51, on the next page, lists the five leading causes of death by age group. Excluding infants, accidents were the leading cause of death to age 44. The

leading cause of death for the 45 to 54, and 55 to 64 age group was cancer. Heart disease was the leading cause of death for the 65 and over age group.

Table 51
South Dakota Resident Five Leading Causes of Death by Age Group, 2005

Rank	All Ages	Under 1	1-4	5-14	15-24	25-34	35-44	45-54	55-64	65 & Over
1	Heart Disease 1,764	Congenital Malformations 21	Accidents 9	Accidents 16	Accidents 54	Accidents 34	Accidents 50	Malignant Neoplasms (cancer) 132	Malignant Neoplasms (cancer) 290	Heart Disease 1,512
2	Malignant Neoplasms (cancer) 1,610	Short Gestation and Low Birth Weight 10	Assault (homicide) 4	Intentional Self-Harm (suicide) 3	Intentional Self-Harm (suicide) 26	Intentional Self-Harm (suicide) 18	Malignant Neoplasms (cancer) 34	Heart Disease 87	Heart Disease 136	Malignant Neoplasms (cancer) 1,136
3	Cerebrovascular Diseases 511	Atelectasis 9	**	Congenital Malformations 2	Malignant Neoplasms (cancer) 5	Malignant Neoplasms (cancer) 12	Heart Disease 20	Accidents 43	Chronic Lower Respiratory Diseases 40	Cerebrovascular Diseases 458
4	Chronic Lower Respiratory Diseases 440	Sudden Infant Death Syndrome 7	**	***	Assault (homicide) 4	Heart Disease 8	Intentional Self-Harm (suicide) 19	Chronic Liver Disease and Cirrhosis 22	Accidents 35	Chronic Lower Respiratory Diseases 392
5	Accidents 396	Complications of Placenta, Cord, and Membranes 5	**	***	Cerebral Palsy & Other Paralytic Syndromes 3	Assault (homicide) 5	Chronic Liver Disease and Cirrhosis 12	Intentional Self-Harm (suicide) 19	Cerebrovascular Diseases 33	Alzheimer's Disease 288

Note: **The following causes each had 1 death; malignant neoplasms (cancer), congenital malformations, deformations, and chromosomal abnormalities, other disorders of the nervous system, cerebral palsy and other paralytic syndromes.

***The following causes each had 1 death; heart disease, assault (homicide), systemic connective tissue disorders, cerebral palsy and other paralytic syndromes all had 1 death.

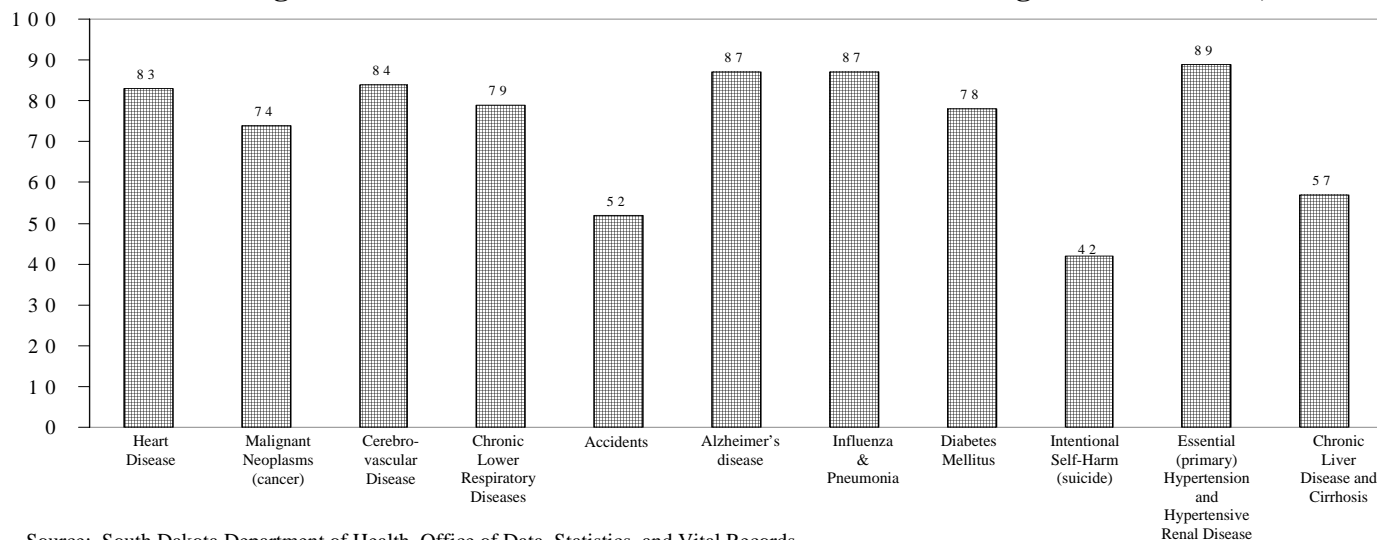
Source: South Dakota Department of Health, Office of Data, Statistics, and Vital Records

Median Age

Figure 9, below, presents data on the median age at death for the 10 leading

causes of death for South Dakota residents in 2005.

Figure 9
Median Age at Death for South Dakota Residents for the Leading Causes of Death, 2005



Source: South Dakota Department of Health, Office of Data, Statistics, and Vital Records

Table 52, below, shows the median age at death for South Dakota residents from the leading causes of death by race and gender. In 2005, the median age at death was 80 for all South Dakotans; for white residents the median age was 81, compared to 58 for American Indians. The overall median age at death stayed

the same for whites and increased by one for American Indians when compared to their overall median age at death in 2004. The median age at death in 2005 for South Dakota resident males and females was 76 and 83, respectively. This has not changed in the last five years.

Table 52
Median Age at Death for South Dakota Residents for the Leading Causes of Death
by Race and Gender, 2005

Cause of Death	Median Age at Death in Years				
	All	Race		Gender	
	Total Deaths	White	American Indian	Male	Female
South Dakota (All Deaths)	80	81	58	76	83
Heart Disease (I00-I09, I11, I13, I20-I51)	83	83	68	79	87
Malignant Neoplasms (cancer) (C00-C97)	74	75	65	73	75
Cerebrovascular Diseases (I60-I69)	84	84	75	81	86
Chronic Lower Respiratory Diseases (J40-J47)	79	80	72	79	80
Accidents (V01-X59, Y85-Y86)	52	61	33	44	78
Alzheimer's Disease (G30)	87	87	*	85	89
Influenza and Pneumonia (J10-J18)	87	87	65	84	88
Diabetes Mellitus (E10-E14)	78	81	69	76	79
Intentional Self-Harm (suicide) (X60-X84, Y87.0)	42	47	21	41	*
Essential (primary) Hypertension and Hypertensive Renal Disease (I10 & I12)	89	89	*	*	91
Chronic Liver Disease and Cirrhosis (K70 & K73-K74)	57	*	47	53	*
Metabolic Disorders (E70-E90)	*	*	*	*	88
Assault (homicide) (X85-Y09, Y87.1)	*	*	30	*	*
Mental and Behavioral Disorders due to Psychoactive Substance Use (F10-F19)	*	*	50	*	*
All Other Causes	80	81	53	77	82

Note: Letter / number combinations following cause of death are ICD-10 codes.

*This cause was not one of the ten leading causes of death for this race or gender.

Source: South Dakota Department of Health, Office of Data, Statistics, and Vital Records

Years of Potential Life Lost

Figure 10, on the next page, depicts the years of potential life lost (YPLL) before age 75 for each of these causes. Please refer to page 222 of the technical notes section for an explanation of how

YPLL before age 75 is calculated. Cancer led in YPLL (11,386 years) because many of the decedents were at a relatively young age at the time of death.

Figure 10
South Dakota Resident Years of Potential Life Lost (YPLL)
Before Age 75 for the Leading Causes of Death, 2005

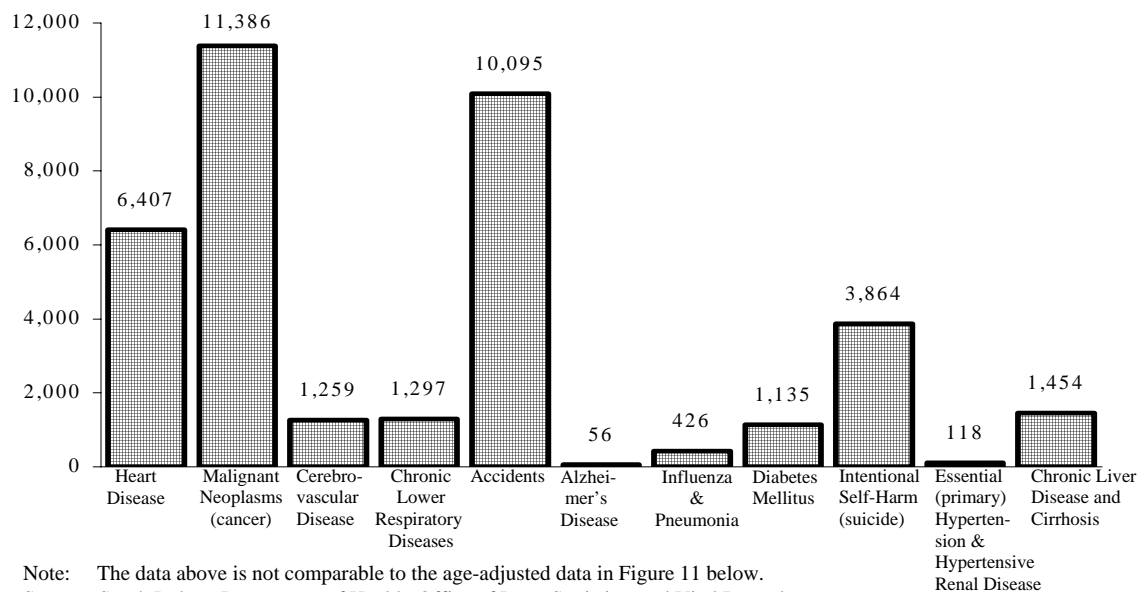
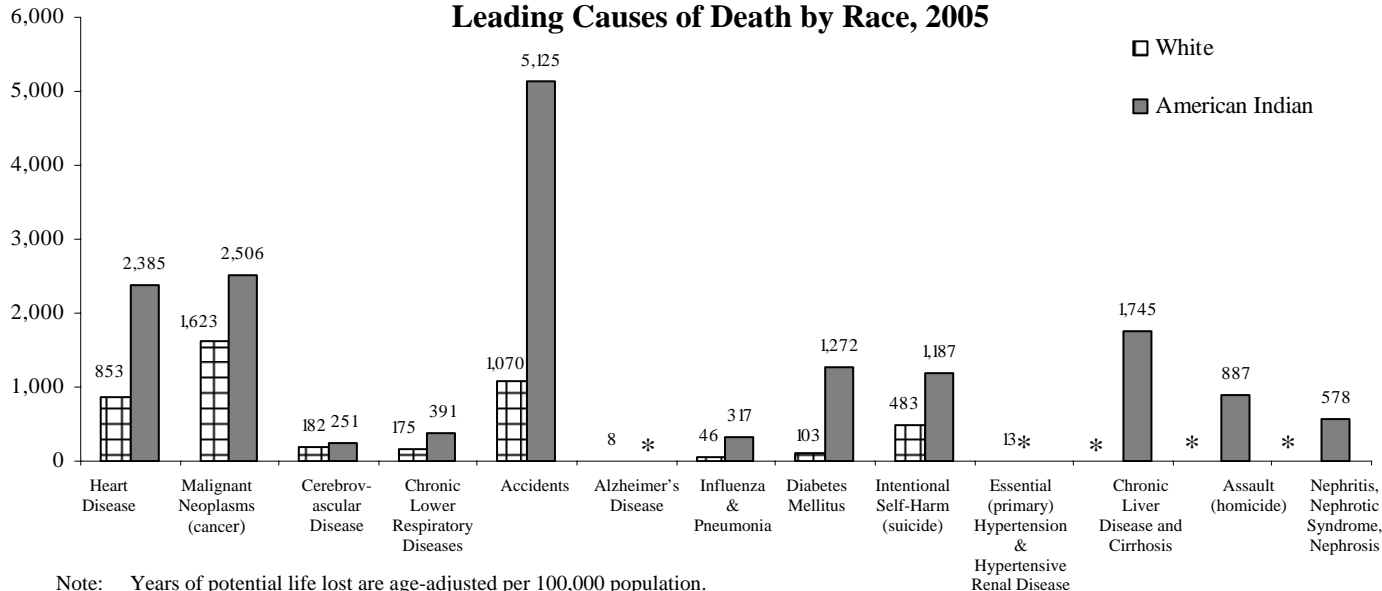


Figure 11, below, illustrates the years of potential life lost (YPLL) before the age 75 per 100,000 population for the top 10 causes of death by race. When comparing YPLL by race, American Indians exceed whites substantially in YPLL for the leading causes of death.

American Indians' largest YPLL was accidents with 5,125 years while whites' largest YPLL was cancer with

1,623 years. Whites' second largest YPLL was accidents with 1,070 years while American Indians' second largest YPLL was cancer with 2,506 years. Whites' third largest YPLL was heart disease with 853 years. Heart disease was also the third largest YPLL for American Indians with 2,385 years, which still exceeded whites' largest YPLL (cancer).

Figure 11
Age-Adjusted Years of Potential Life Lost (YPLL) Before Age 75 for the
Leading Causes of Death by Race, 2005



Place of Death

Table 53, below, displays the 10 leading causes of death by place where death occurred in 2005. Overall, hospital had the highest

occurrence of deaths with 41 percent. nursing home, long term care, and hospice facility followed closely with 37.2 percent.

Table 53
South Dakota Resident Deaths by Cause of Death and Place of Death, 2005

Cause of Death	Total		Hospital		Nursing Home/Long Term Care/Hospice Facility		Residence		All Other Reported Entries	
	Num	%	Num	%	Num	%	Num	%	Num	%
South Dakota (All Deaths)	7,074	100.0	2,897	41.0	2,634	37.2	1,229	17.4	308	4.4
Heart Disease.....(I00-I09, I11, I13, I20-I51)	1,764	100.0	688	39.0	625	35.4	400	22.7	50	2.8
Malignant Neoplasms (cancer).....(C00-C97)	1,610	100.0	617	38.3	529	32.9	431	26.8	32	2.0
Cerebrovascular Diseases.....(I60-I69)	511	100.0	215	42.1	273	53.4	22	4.3	1	0.2
Chronic Lower Respiratory Diseases.....(J40-J47)	440	100.0	205	46.6	160	36.4	68	15.5	7	1.6
Accidents.....(V01-X59, Y85-Y86)	396	100.0	172	43.4	36	9.1	42	10.6	145	36.6
Alzheimer's Disease.....(G30)	289	100.0	21	7.3	254	87.9	12	4.2	2	0.7
Influenza and Pneumonia(J10-J18)	242	100.0	124	51.2	109	45.0	7	2.9	2	0.8
Diabetes Mellitus.....(E10-E14)	239	100.0	88	36.8	112	46.9	33	13.8	6	2.5
Intentional Self-Harm (suicide)(X60-X84, Y87.0)	123	100.0	18	14.6	0	0.0	80	65.0	25	20.3
Essential (primary) Hypertension and Hypertensive Renal Disease.....(I10 & I12)	83	100.0	23	27.7	47	56.6	12	14.5	1	1.2
Chronic Liver Disease and Cirrhosis(K70 & K73-K74)	83	100.0	52	62.7	21	25.3	9	10.8	1	1.2
All Other Causes	1,294	100.0	674	52.1	468	36.2	113	8.7	36	2.8

Source: South Dakota Department of Health, Office of Data, Statistics, and Vital Records.

Tobacco Use

Tobacco use may contribute to deaths due to a wide variety of diseases. For example, tobacco use contributes to many deaths due to emphysema or lung cancer and heart disease and cancers of the head and neck. For a complete list of diseases known to be caused by tobacco use, please refer to The Health Consequences of Smoking a Report of the Surgeon General 2004. The report is online at www.surgeongeneral.gov/library/smokingconsequences/. The certifier was instructed to check “yes” or “probably” if in their opinion, the use of tobacco contributed to death or

check “no” if in their clinical judgment tobacco use did not contribute to the death. There was also the option of “unknown” if the certifier was unsure if tobacco use contributed to death. On 1,306 deaths or 18.5 percent, the certifier indicated “yes” or “probably” that tobacco use contributed to the death. Conversely, on 4,014 deaths, or 56.7 percent, the certifier indicated that tobacco use did not contribute to the death.

In the remaining 1,754 deaths, or 24.8 percent, the certifier was unsure if tobacco use contributed to the death.

Table 54, below, displays the ten leading causes of death where the certifier said “yes” or “probably” that tobacco use contributed to the death. Tobacco use contributed to death in 75.4 percent, or 52 out of the 69 emphysema deaths in 2005. In 73.4 percent, or 343 trachea, bronchus, and

lung cancer deaths the certifier said “yes” or “probably” that tobacco use contributed to the death. Of the 440 chronic lower respiratory disease deaths in 2005, certifiers said tobacco use contributed to 312 deaths, or 70.9 percent.

Table 54
South Dakota Resident Leading Causes of Death as They Relate to Tobacco Use, 2005
(Did Tobacco Use Contribute to Death)

Cause of Death	Yes/Probably		Total Deaths	
	Number	Percent	Number	Percent
Total	1,306	18.5	7,074	100.0
Malignant Neoplasms (cancer).....(C00-C97)	480	29.8	1,610	100.0
Trachea, Bronchus, and Lung.....(C33-C34)	343	73.4	467	100.0
Esophagus.....(C15)	19	48.7	39	100.0
Bladder.....(C67)	15	32.6	46	100.0
Lip, Oral Cavity, and Pharynx.....(C00-C14)	11	52.4	21	100.0
Colon, Rectum, and Anus.....(C18-C21)	9	5.1	176	100.0
Chronic Lower Respiratory Diseases.....(J40-J47)	312	70.9	440	100.0
Emphysema.....(J43)	52	75.4	69	100.0
Heart Disease.....(I00-I09, I11, I13, I20-I51)	253	14.3	1,764	100.0
Acute Myocardial Infarction.....(I21-I22)	78	12.8	610	100.0
Atherosclerotic Cardiovascular Disease.....(I25.0)	14	12.0	117	100.0
Cerebrovascular Diseases.....(I60-I69)	61	11.9	511	100.0
Diabetes Mellitus.....(E10-E14)	41	17.2	239	100.0
Influenza and Pneumonia.....(J10-J18)	17	7.0	242	100.0
Pneumonia.....(J12-J18)	14	6.8	207	100.0
Chronic Liver Disease and Cirrhosis....(K70 & K73-K74)	12	14.5	83	100.0
Alcoholic Liver Disease.....(K70)	9	15.3	59	100.0
Accidents(V01-X59, Y85-Y86)	10	2.5	396	100.0
Aortic Aneurysm and Dissection.....(I71)	9	17.6	51	100.0
Alzheimer’s Disease.....(G30)	8	2.8	289	100.0
Mental and Behavioral Disorders due to Psychoactive Substance Use.....(F10-F19)	8	25.0	32	100.0
All Other Causes	95	6.7	1,417	100.0

Source: South Dakota Department of Health, Office of Data, Statistics, and Vital Records

Method of Disposition

Table 55, on the next page, displays the different methods of disposition for the last 10 years. The top disposition in 2005 was burial with 5,373 deaths. The second highest method of disposition in 2005 was cremation with 1,515 deaths.

Since 1996, burial has been the

highest method of disposition chosen and cremation has been the second highest method of disposition chosen. Cremation has also been on a steady increase since 1996. In 1996, cremation accounted for 10.6 percent of dispositions and in 2005 for 21.4 percent. This lead to a 101.9 percent increase from 1996 to 2005 in cremation.

Table 55
South Dakota Resident Deaths by Disposition, 1996-2005

Year	Type of Disposition						
	Total Deaths	Burial	Cremation	Removal from State	Donation	Entombment	Other
2005	7,074	5,373	1,515	151	27	7	0
2004	6,811	5,305	1,348	120	22	12	0
2003	7,109	5,675	1,321	76	26	**	8
2002	6,886	5,627	1,148	72	24	**	11
2001	6,915	5,700	1,102	79	20	**	10
2000	7,014	5,859	1,038	86	20	**	8
1999	6,941	5,825	938	141	21	**	11
1998	6,850	5,808	829	175	25	**	5
1997	6,855	5,882	761	182	19	**	6
1996	6,793	5,843	720	209	16	**	2

Note: Failure of deaths to add to total is due to not stated disposition.

** Prior to 2004 entombment was included in the other category.

Source: South Dakota Department of Health, Office of Data, Statistics, and Vital Records

Education

The education of the deceased was collected on the death certificate for the first time in 2004. Table 56, below, displays the level of education by age group for residents ages 25 and above while Table 57, on the next page, displays level of education by leading causes of death for residents ages 25 and above. Table 56 has been included because the large differences in age distributions among the education groups could

have an effect on the leading causes of death shown in Table 57. For example, when looking at the 8th grade or less education level the leading cause of death is heart disease with 30.3 percent. However, when comparing college degree/votech/teacher's certificate the leading cause of death is cancer with 26.8 percent. Part of the reason could be because of the differences of age distribution between education groups in Table 56.

Table 56
South Dakota Resident Deaths by Age and Education for Ages 25 and Above, 2005

Age	Total		8 th Grade or Less		Some High School		High School Graduate or GED		Some College, but No Degree		College Degree/Votech/Teacher's Certificate	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Total	6,842	100.0	1,661	100.0	635	100.0	2,588	100.0	770	100.0	1,163	100.0
25-34	106	1.5	8	0.5	10	1.6	43	1.7	22	2.9	22	1.9
35-44	194	2.8	14	0.8	28	4.4	84	3.2	21	2.7	45	3.9
45-54	408	6.0	29	1.7	31	4.9	196	7.6	68	8.8	84	7.2
55-64	699	10.2	50	3.0	70	11.0	303	11.7	108	14.0	165	14.2
65-74	980	14.3	170	10.2	93	14.6	423	16.3	99	12.9	190	16.3
75-84	2,025	29.6	543	32.7	189	29.8	797	30.8	199	25.8	289	24.8
85+	2,430	35.5	847	51.0	214	33.7	742	28.7	253	32.9	368	31.6

Note: Failure of deaths to add to total is due to not stated education.

Source: South Dakota Department of Health, Office of Data, Statistics, and Vital Records

Table 57
South Dakota Resident Leading Causes of Death for Ages 25 and Above by Education, 2005

Cause of Death	Total		8 th Grade or Less		Some High School		High School Graduate or GED		Some College, but No Degree		College Degree/Votech/Teacher's Certificate	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Total	6,842	100.0	1,661	100.0	635	100.0	2,588	100.0	770	100.0	1,163	100.0
Heart Disease (I00-I09, I11, I13, I20-I51)	1,763	25.8	503	30.3	163	25.7	630	24.3	180	23.4	280	24.1
Malignant Neoplasms (cancer)(C00-C97)	1,604	23.4	285	17.2	141	22.2	665	25.7	197	25.6	312	26.8
Cerebrovascular Diseases(I60-I69)	510	7.5	150	9.0	44	6.9	174	6.7	61	7.9	79	6.8
Chronic Lower Respiratory Diseases.....(J40-J47)	439	6.4	123	7.4	41	6.5	169	6.5	39	5.1	64	5.5
Accidents.....(V01-X59, Y85-Y86)	313	4.6	53	3.2	24	3.8	128	4.9	42	5.5	66	5.7
Alzheimer's Disease.....(G30)	289	4.2	79	4.8	24	3.8	101	3.9	34	4.4	50	4.3
Influenza & Pneumonia.....(J10-J18)	242	3.5	65	3.9	18	2.8	82	3.2	37	4.8	39	3.4
Diabetes Mellitus.....(E10-E14)	239	3.5	56	3.4	37	5.8	86	3.3	22	2.9	36	3.1
Intentional Self-Harm (suicide)(X60-X84, Y87.0)	94	1.4	7	0.4	11	1.7	34	1.3	20	2.6	22	1.9
Chronic Liver Disease and Cirrhosis.....(K70 & K73-K74)	83	1.2	12	0.7	12	1.9	34	1.3	11	1.4	13	1.1
Essential (primary) Hypertension and Hypertensive Renal Disease (I10 & I12)	83	1.2	25	1.5	6	0.9	32	1.2	5	0.6	15	1.3
All Other Causes	1,183	17.3	303	18.2	114	18.0	453	17.5	122	15.8	187	16.1

Note: Failure of deaths to add to total is due to not stated education.

Source: South Dakota Department of Health, Office of Data, Statistics, and Vital Records

Leading Causes and Selected Components

Table 58, pages 60 to 62, displays South Dakota resident deaths, the crude death rate, and the age-adjusted death rate for 15 leading causes and selected components from 2001 to 2005.

The crude and age adjusted rate for all causes in 2005 were 937.1 and 816.2 respectively, which are up from the crude and age-adjusted rates in 2004 of 902.3 and 783.6 respectively.

Table 58
South Dakota Resident Deaths, Crude, and Age-Adjusted Death Rates for 15 Leading Causes and Selected Components, 2001-2005

Cause of Death	Number						Crude Death Rates						Age-Adjusted Death Rates					
	Total	2005	2004	2003	2002	2001	Total	2005	2004	2003	2002	2001	Total	2005	2004	2003	2002	2001
All Causes	34,795	7,074	6,811	7,109	6,886	6,915	921.9	937.1	902.3	941.8	912.2	916.1	801.2	816.2	783.6	819.2	791.0	796.3
Heart Disease	9,398	1,764	1,775	1,942	1,933	1,984	249.0	233.7	235.1	257.3	256.1	262.8	209.9	196.9	197.3	217.3	216.0	222.0
Acute Myocardial Infarction	3,256	610	631	697	633	685	86.3	80.8	83.6	92.3	83.9	90.7	74.7	70.2	71.6	80.3	72.3	79.3
All Other Forms of Chronic Ischemic Heart Disease	3,068	666	614	594	593	601	81.3	88.2	81.3	78.7	78.6	79.6	67.8	73.5	67.9	65.6	65.5	66.5
Heart Failure	809	54	145	185	207	218	21.4	7.2	19.2	24.5	27.4	28.9	17.1	5.5	15.2	19.5	22.1	23.0
Atherosclerotic Cardiovascular Disease	590	117	92	119	120	142	15.6	15.5	12.2	15.8	15.9	18.8	12.4	12.5	9.6	12.5	12.5	14.7
Hypertensive Heart Disease	153	53	35	23	20	22	4.1	7.0	4.6	3.0	2.6	2.9	3.2	5.4	3.7	2.4	2.0	2.3
Acute Rheumatic Fever & Chronic Rheumatic Heart Diseases	55	8	16	13	11	7	1.5	1.1	2.1	1.7	1.5	0.9	1.3	0.8	1.9	1.5	1.3	0.8
Acute and Subacute Endocarditis	21	4	2	3	6	6	0.6	0.5	0.3	0.4	0.8	0.8	0.5	0.4	0.3	0.3	0.7	0.7
Diseases of Pericardium and Acute Myocarditis	15	2	2	3	4	4	0.4	0.3	0.3	0.4	0.5	0.5	0.4	0.2	0.2	0.4	0.5	0.5
All Other Forms of Heart Disease	1,431	250	238	305	339	299	37.9	33.1	31.5	40.4	44.9	39.6	32.6	28.4	26.9	34.7	39.0	34.2
Malignant Neoplasms (cancer)	7,973	1,610	1,559	1,645	1,561	1,598	211.2	213.3	206.5	217.9	206.8	211.7	191.3	194.9	186.4	197.1	186.6	191.2
Trachea, Bronchus, and Lung	2,113	467	423	406	403	414	56.0	61.9	56.0	53.8	53.4	54.8	51.6	57.2	51.7	49.0	49.2	50.7
Colon, Rectum, and Anus	850	176	151	176	168	179	22.5	23.3	20.0	23.3	22.3	23.7	19.8	20.8	17.4	20.7	19.4	20.9
Female Breast	539	117	105	120	109	88	28.3	30.8	27.6	31.6	28.7	23.1	24.0	25.8	23.4	27.2	24.5	19.3
Prostate	526	94	102	106	109	115	28.1	25.1	27.2	28.3	29.1	30.7	30.8	27.2	29.7	31.4	32.0	33.6
Pancreas	471	90	102	95	85	99	12.5	11.9	13.5	12.6	11.3	13.1	11.4	11.1	12.2	11.2	10.3	12.2
Leukemia	353	63	71	80	67	72	9.4	8.3	9.4	10.6	8.9	9.5	8.3	7.4	8.2	9.6	8.0	8.5
Non-Hogkin's Lymphoma	328	56	67	68	54	83	8.7	7.4	8.9	9.0	7.2	11.0	7.7	6.6	7.9	7.8	6.5	9.7
Ovary	222	42	34	46	53	47	11.7	11.0	8.9	12.1	13.9	12.4	9.6	9.3	7.5	10.0	11.2	10.2
Mninges, Brain, and Other Parts of Central Nervous System	220	34	50	53	44	39	5.8	4.5	6.6	7.0	5.8	5.2	5.5	4.3	6.3	6.8	5.4	4.9
Kidney and Renal Pelvis	206	43	45	39	35	44	5.5	5.7	6.0	5.2	4.6	5.8	5.0	5.3	5.3	4.8	4.3	5.2
Bladder	196	46	35	40	39	36	5.2	6.1	4.6	5.3	5.2	4.8	4.5	5.2	4.1	4.6	4.4	4.0
Multiple Myeloma and Immunoproliferative	190	28	45	43	42	32	5.0	3.7	6.0	5.7	5.6	4.2	4.5	3.2	5.2	5.2	5.0	3.8

Table 58 (Continued)
South Dakota Resident Deaths, Crude, and Age-Adjusted Death Rates for 15 Leading Causes and Selected Components, 2001-2005

Cause of Death	Number						Crude Death Rates						Age-Adjusted Death Rates					
	Total	2005	2004	2003	2002	2001	Total	2005	2004	2003	2002	2001	Total	2005	2004	2003	2002	2001
Esophagus	186	39	40	41	31	35	4.9	5.2	5.3	5.4	4.1	4.6	4.6	4.9	4.9	5.1	3.9	4.3
Liver and Intrahepatic Bile Ducts	173	43	35	29	30	36	4.6	5.7	4.6	3.8	4.0	4.8	4.3	5.3	4.2	3.6	3.6	4.6
Stomach	134	35	17	22	33	27	3.6	4.6	2.3	2.9	4.4	3.6	3.2	4.3	2.0	2.7	4.0	3.3
Corpus Uteri and Uterus, Part Unspecified	111	18	19	22	18	34	5.8	4.7	5.0	5.8	4.7	8.9	4.6	3.9	4.2	4.5	3.5	6.7
Melanoma of Skin	106	16	16	33	16	25	2.8	2.1	2.1	4.4	2.1	3.3	2.7	2.2	1.9	4.1	2.0	3.1
Lip, Oral Cavity, and Pharynx	98	21	12	20	25	20	2.6	2.8	1.6	2.6	3.3	2.6	2.4	2.7	1.4	2.5	3.0	2.4
Cervix Uteri	41	7	7	9	10	8	2.2	1.8	1.8	2.4	2.6	2.1	2.1	1.9	1.9	2.2	2.5	2.1
Larynx	37	4	5	12	10	6	1.0	0.5	0.7	1.6	1.3	0.8	0.9	0.5	0.7	1.5	1.3	0.8
Hodgkin's Disease	21	3	4	8	4	2	0.6	0.4	0.5	1.1	0.5	0.3	0.6	0.4	0.5	1.1	0.5	0.3
Ill-Defined, Secondary, and Unspecified Sites	401	74	87	76	87	77	10.6	9.8	11.5	10.1	11.5	10.2	9.5	8.8	10.5	8.9	10.2	8.9
All Other Cancers	451	94	87	101	89	80	11.9	12.5	11.5	13.4	11.8	10.6	10.8	11.4	10.3	12.3	10.5	9.4
Cerebrovascular Diseases	2,458	511	463	475	518	491	65.1	67.7	61.3	62.9	68.6	65.0	53.5	56.0	50.1	51.9	55.8	53.5
Chronic Lower Respiratory Diseases	1,954	440	393	379	382	360	51.8	58.3	52.1	50.2	50.6	47.7	44.9	50.4	44.6	43.8	43.7	41.8
Accidents	1,919	396	407	390	344	382	50.8	52.5	53.9	51.7	45.6	50.6	48.3	49.5	51.3	49.8	43.5	47.4
Motor Vehicle Accidents	953	181	185	215	185	187	25.3	24.0	24.5	28.5	24.5	24.8	25.1	23.9	24.4	28.5	24.1	24.5
All Other Accidents	966	215	222	175	159	195	25.6	28.5	29.4	23.2	21.1	25.8	23.2	25.7	26.9	21.3	19.3	22.8
Diabetes Mellitus	1,070	239	227	201	193	210	28.4	31.7	30.1	26.6	25.6	27.8	25.0	27.7	26.2	23.6	23.0	24.4
Influenza and Pneumonia	1,070	242	180	223	239	186	28.4	32.1	23.8	29.5	31.7	24.6	22.8	25.8	19.2	23.7	25.8	19.8
Alzheimer's Disease	1,047	289	255	175	169	159	27.7	38.3	33.8	23.2	22.4	21.1	21.6	29.9	26.2	18.1	17.5	16.5
Organic, Including Symptomatic, Mental Disorders	563	*	91	159	144	135	14.9	*	12.1	21.1	19.1	17.9	11.5	*	9.3	16.2	14.7	13.8
Intentional Self-Harm (suicide)	542	123	114	103	94	108	14.4	16.3	15.1	13.6	12.5	14.3	14.5	16.2	15.3	13.8	12.4	14.5
Nephritis, Nephrotic Syndrome, and Nephrosis	508	54	93	131	128	102	13.5	7.2	12.3	17.4	17.0	13.5	11.2	6.0	10.4	14.3	14.0	11.1
Chronic Liver Disease and Cirrhosis	419	83	97	81	77	81	11.1	11.0	12.9	10.7	10.2	10.7	11.1	11.0	12.8	10.8	10.3	10.8

Table 58 (Continued)
South Dakota Resident Deaths, Crude, and Age-Adjusted Death Rates for 15 Leading Causes and Selected Components, 2001-2005

Cause of Death	Number						Crude Death Rates						Age-Adjusted Death Rates					
	Total	2005	2004	2003	2002	2001	Total	2005	2004	2003	2002	2001	Total	2005	2004	2003	2002	2001
Septicemia	300	*	*	69	68	69	7.9	*	*	9.1	9.0	9.1	6.9	*	*	7.9	7.8	7.8
Parkinson's Disease	296	60	65	56	60	55	7.8	7.9	8.6	7.4	7.9	7.3	6.5	6.6	7.0	6.2	6.5	5.9
Aortic Aneurysm and Dissection	280	*	57	54	62	56	7.4	*	7.6	7.2	8.2	7.4	6.4	*	6.5	6.1	7.1	6.3
Essential (primary) Hypertension and Hypertensive Renal Disease	*	83	55	*	*	*	*	11.0	7.3	*	*	*	*	8.7	5.9	*	*	*
Neoplasms of Uncertain or Unknown Behavior	*	59	*	*	*	*	*	7.8	*	*	*	*	*	6.6	*	*	*	*
Metabolic Disorders	*	58	*	*	*	*	*	7.7	*	*	*	*	*	6.3	*	*	*	*

Note: *This cause was not one of the fifteen leading causes or death for that year.

Source: South Dakota Department of Health, Office of Data, Statistics, and Vital Records.